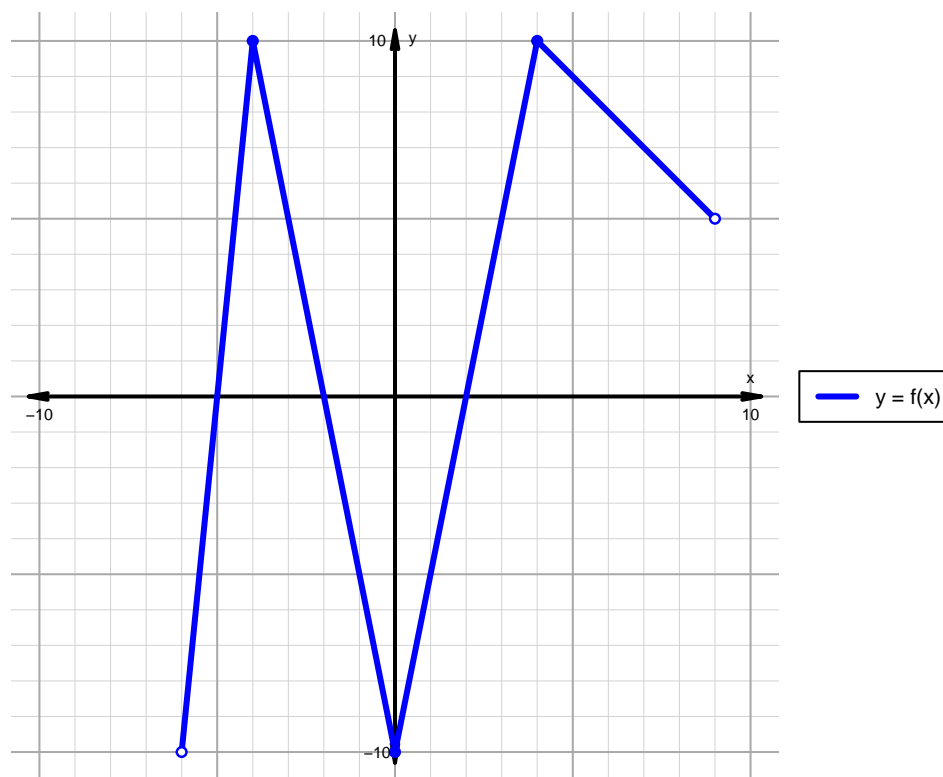


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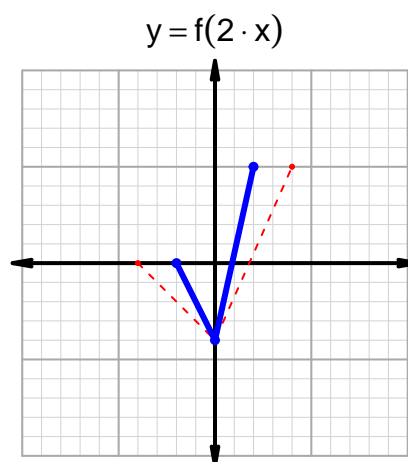
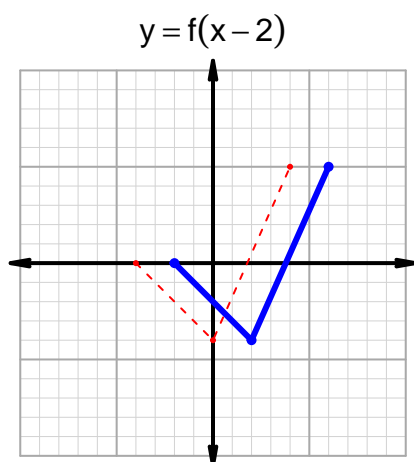
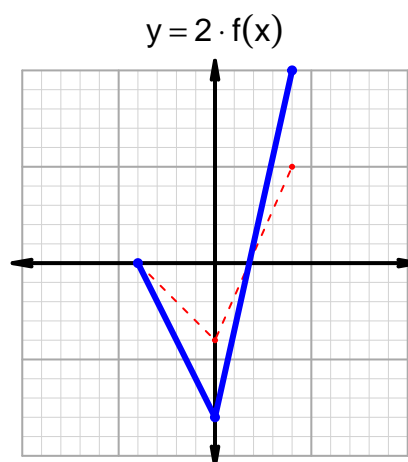
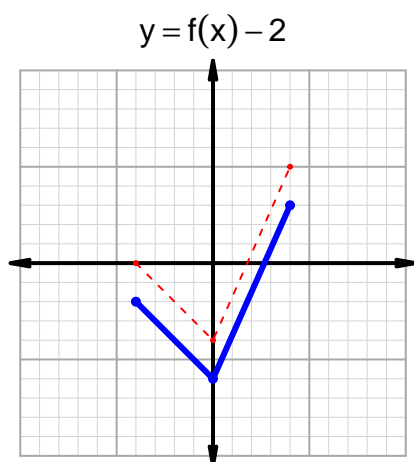
Intervals, Transformations, and Slope Solution (version 34)1. The function f is graphed below.

Indicate the following intervals using interval notation. Remember, you can use \cup between two intervals to indicate the union. Except for range, all intervals will indicate x values; this is standard.

Feature	Where
Positive	$(-5, -2) \cup (2, 9)$
Negative	$(-6, -5) \cup (-2, 2)$
Increasing	$(-6, -4) \cup (0, 4)$
Decreasing	$(-4, 0) \cup (4, 9)$
Domain	$(-6, 9)$
Range	$(-10, 10)$

Intervals, Transformations, and Slope Solution (version 34)

2. In the four graphs below, $y = f(x)$ is graphed as a dotted line. With a solid line, please graph the transformations indicated by the equations below.



3. Let function g be defined by the table below. Use the formula $\frac{g(x_2) - g(x_1)}{x_2 - x_1}$ to find the average rate of change between $x_1 = 16$ and $x_2 = 51$. Express your answer as a reduced fraction.

x	$g(x)$
16	40
40	51
51	96
96	16

$$\frac{g(51) - g(16)}{51 - 16} = \frac{96 - 40}{51 - 16} = \frac{56}{35}$$

The greatest common factor of 56 and 35 is 7. Divide numerator and denominator by the greatest common factor.

$$\text{AROC} = \frac{8}{5}$$